AMENDMENTS TO THE CLAIMS

For the Examiner's convenience, all pending claims are presented below with changes shown in accordance with the new mandatory amendment format.

1.   (Currently Amended) A method for initializing a new node in a network comprising:

adding a new node to a network having a plurality of nodes, wherein the plurality of nodes is arranged in the form of a virtual tree and the new node is a node of the tree, each node of the tree having a set of attributes and a set of rolled up attributes for identification;

sending a query automatically to the said plurality of nodes to determine what contents to download, the said content being stored as block files in one or more nodes of the said network, the query comprising the set of attributes and the set of rolled up attributes for the new node;

receiving replies to the said query from a subset of the said plurality of nodes having the said contents for the said new node, wherein each of the replies identifies what subset of the block files is available in a replying node and performance characteristics of the replying node;

downloading desired portions of the said contents from the said subset of the block files from the replying nodes that are least congested said plurality of nodes having said contents.

2.   (Currently Amended) The method of claim 1, wherein the said network comprises a packet-communication network.

3.   (Cancelled)

4.   (Cancelled)

5.   (Currently Amended) The method of claim 1, wherein the said set of attributes comprises a bitmap and the said set of rolled up attributes comprises a combination of the set of attributes of all lineal descendants of the said node.

6.   (Currently Amended) The method of claim 5, wherein the said combination comprises the binary OR of the said all lineal descendants of the said node.

7.   (Currently Amended) The method of claim 1 3, wherein the said sending the said query automatically to the said plurality of nodes comprises:
announcing the said new node's inclusion in the said network by sending a
        notification to at least one neighbor node; and
forwarding the said notification to nodes neighboring the said at least one neighbor
        node, the said forwarding continuing until each of the said plurality of nodes
        in the said network receives the said notification.

8.   (Currently Amended) The method of claim 7, wherein the said new node does not receive the said notification from a neighbor node.

9.   (Currently Amended) The method of claim 8, wherein the said content is stored as block files in the said plurality of nodes having the said content.

10.   (Currently Amended) The method of claim 9, wherein each of the said replies from a replying node comprises:

identification of what content <u>the</u> ~~said~~ new node should have; <u>and</u>

identification of portions of <u>the</u> ~~said~~ content available in <u>the</u> ~~said~~ replying node~~; and~~

~~performance characteristics of said replying node~~.

11. (Currently Amended) The method of claim 10, wherein <u>the</u> ~~said~~ downloading <u>the</u> ~~said~~ desired portion of <u>the</u> ~~said~~ content comprises downloading a desired subset of <u>the</u> ~~said~~ block files from <u>the</u> ~~said~~ replying nodes in close proximity ~~identified as least~~ ~~congested~~.

12. (Currently Amended) The method of claim 11, wherein <u>the</u> ~~said~~ least congested is determined from <u>the</u> ~~said~~ performance characteristics.

13. (Currently Amended) The method of claim 11, wherein <u>the</u> ~~said~~ nodes in close proximity comprise nodes having the least latency.

14. (Currently Amended) The method of claim 11, wherein <u>the</u> ~~said~~ downloading <u>the</u> ~~said~~ desired subset of block files, is performed in parallel from <u>the</u> ~~said~~ least congested nodes.

15. (Cancelled)

16. (Currently Amended) A method for initializing a new node in a network comprising:

adding a new node to a network having a plurality of nodes, wherein <u>the</u> ~~said~~ plurality of nodes is arranged in the form of a virtual tree and <u>the</u> ~~said~~ new node is a node of <u>the</u> ~~said~~ tree, each node of <u>the</u> ~~said~~ tree having a set of attributes and a set of rolled up attributes for identification;

sending a query automatically from the ~~said~~ new node to the ~~said~~ plurality of nodes to

determine what contents to download, the ~~said~~ content being stored as block

files in one or more nodes of the ~~said~~ network, the ~~said~~ query comprising the

~~said~~ set of attributes and the ~~said~~ set of rolled up attributes for the ~~said~~ new

node;

receiving replies to the ~~said~~ query from a subset of the ~~said~~ plurality of nodes having

the ~~said~~ contents for the ~~said~~ new node, wherein each of the ~~said~~ replies

identifies what subset of the ~~said~~ block files is available in a replying node and

performance characteristics of the ~~said~~ replying node; and

downloading desired subsets of the ~~said~~ block files from the ~~said~~ replying nodes that

are least congested.

17.   (Currently Amended) A machine-readable medium that provides instructions, which

when executed by a machine, causes the machine to perform operations ~~A computer~~

~~program product~~ comprising:

~~a computer usable medium comprising computer readable code for~~ initializing a new

node in a network, the machine-readable medium ~~said computer readable~~

~~program code~~ configured to:

add a new node to a network having a plurality of nodes, wherein the plurality of

nodes is arranged in the form of a virtual tree and the new node is a node of

the tree, each node of the tree having a set of attributes and a set of rolled up

attributes for identification;

send a query automatically to the ~~said~~ plurality of nodes to determine what content to

download, the content being stored as block files in one or more nodes of the

network, the query comprising the set of attributes and the set of rolled up

attributes for the new node said new node should have;

receive replies to the said query from a subset of the said plurality of nodes having the

said content for the said new node, wherein each of the replies identifies what

subset of the block files is available in a replying node and performance

characteristics of the replying node; and

download a desired subset portion of the said block files content from the said

replying subset of said plurality of nodes that are least congested having the

said content.

18.   (Currently Amended) The machine-readable medium computer program product of

claim 17, wherein the said network comprises a packet-communication network.

19.   (Cancelled)

20.   (Cancelled)

21.   (Currently Amended) The machine-readable medium computer program product of

claim 17 20, wherein the said set of attributes comprises a bitmap and the said set of

rolled up attributes comprises a combination of the set of attributes of all lineal

descendants of the said node.

22.   (Currently Amended) The machine-readable medium computer program product of

claim 21, wherein the said combination comprises the binary OR of the said all lineal

descendants of the said node.

23.   (Currently Amended) The machine-readable medium computer program product of claim 17 19, wherein the said send a query automatically to the said plurality of nodes comprises:

announcing the said new node's inclusion in the said network by sending a

notification to at least one neighbor node;

forwarding the said notification to nodes neighboring the said at least one neighbor

node. the said forwarding continuing until each of the said plurality of nodes

in the said network receives the said notification.

24.   (Currently Amended) The machine-readable medium computer program product of claim 23, wherein the said new node does not receive the said notification from a neighbor node.

25.   (Currently Amended) The machine-readable medium computer program product of claim 24, wherein the said content is stored as block files in the said plurality of nodes having the said content.

26.   (Currently Amended) The machine-readable medium computer program product of claim 25, wherein each of the said replies from a replying node comprises:

identification of what content the said new node should have;

identification of portions of the said content available in the said replying node; and

performance characteristics of the said replying node.

27.   (Currently Amended) The machine-readable medium computer program product of

claim 26, wherein the said download the said desired portion of the said content

comprises computer program product configured to download a desired subset of the

said block files from the said replying nodes in close proximity identified as least

congested.

28.   (Currently Amended) The machine-readable medium computer program product of

claim 27, wherein the said least congested is determined from the said performance

characteristics.

29.   (Currently Amended) The machine-readable medium computer program product of

claim 27, wherein the said nodes in close proximity comprise nodes having the least

latency.

30.   (Currently Amended) The machine-readable medium computer program product of

claim 27, wherein the said download the said desired subset of block files is

performed in parallel from the said replying least congested nodes.

31.   (Currently Amended) An apparatus for initializing a new node in a network

comprising:

a network having a plurality of nodes, each of the said plurality of nodes having one

        or more distribution servers in a distribution server cluster, the said plurality

        of nodes having one or more content for distribution in the said network;

a new node added to the said network, wherein the plurality of nodes is arranged in

        the form of a virtual tree and the new node is a node of the tree, each node of

the tree having a set of attributes and a set of rolled up attributes for

identification;

the said new node sending a query automatically to the said plurality of nodes to

determine what contents to download, the content being stored as block files

in one or more nodes of the network, the query comprising the set of attributes

and the set of rolled up attributes for the new node;

the said new node receiving replies to the said query from a subset of the said

plurality of nodes having the said contents for the said new node, wherein

each of the replies identifies what subset of the block files is available in a

replying node and performance characteristics of the replying node; and said

~~one or more distribution servers in said distribution server cluster in~~

the said new node downloading desired subsets of the block files ~~portions of~~ the said

~~contents~~ from the replying ~~said subset of said plurality of~~ nodes that are least

congested ~~having said contents~~.

32.   (Currently Amended) The apparatus of claim 31, wherein the said network comprises

a packet-communication network.

33.   (Cancelled)

34.   (Cancelled)

35.   (Currently Amended) The apparatus of claim 31 ~~34~~, wherein the said set of attributes

comprises a bitmap and the said set of rolled up attributes comprises a combination of

the set of attributes of all lineal descendants of the said node.

36.   (Currently Amended) The apparatus of claim 35, wherein the said combination

comprises the binary OR of the said all lineal descendants of the said node.

37.   (Currently Amended) The apparatus of claim 31 33, wherein the said sending a query

automatically to the said plurality of nodes comprises:

announcing the said new node's inclusion in the said network by sending a

notification to at least one neighbor node; and

forwarding the said notification to nodes neighboring the said at least one neighbor

node, the said forwarding continuing until each of the said plurality of nodes

in the said network receives the said notification.

38.   (Currently Amended) The apparatus of claim 37, wherein the said new node does not

receive the said notification from a neighbor node.

39.   (Currently Amended) The apparatus of claim 38, wherein the said content is stored as

block files in the said plurality of nodes having the said content.

40.   (Currently Amended) The apparatus of claim 39, wherein each of the said replies

from a replying node comprises:

identification of what content the said new node should have;

identification of portions of the said content available in the said replying node; and

performance characteristics of the said replying node.

41.   (Currently Amended) The apparatus of claim 40, wherein the said downloading the

said desired portion of the said content comprises downloading a desired subset of the

said block files from the ~~said~~ replying nodes in close ~~dose~~ proximity ~~identified as least congested~~.

42.   (Currently Amended) The apparatus of claim 41, wherein the ~~said~~ least congested is determined from the ~~said~~ performance characteristics.

43.   (Currently Amended) The apparatus of claim 41, wherein the ~~said~~ nodes in close proximity comprise nodes having the least latency.

44.   (Currently Amended) The apparatus of claim 41, wherein the ~~said~~ downloading the ~~said~~ desired subset of block files is performed in parallel from the ~~said~~ replying ~~least congested~~ nodes.

45.   (New) The method of claim 16, wherein the network comprises a packet-communication network.

46.   (New) The method of claim 16, wherein the set of attributes comprises a bitmap and the set of rolled up attributes comprises a combination of the set of attributes of all lineal descendants of the node.

47.   (New) A system for initializing a new node in a network comprising:

a storage device coupled to a network;

the network having a plurality of nodes, each of the plurality of nodes having one or more distribution servers in a distribution server cluster, the plurality of nodes having one or more content for distribution in the network;

a new node added to the network, wherein the plurality of nodes is arranged in the form of a virtual tree and the new node is a node of the tree, each node of the tree having a set of attributes and a set of rolled up attributes for identification;

the new node sending a query automatically to the plurality of nodes to determine

what contents to download, the content being stored as block files in one or

more nodes of the network, the query comprising the set of attributes and the

set of rolled up attributes for the new node;

the new node receiving replies to the query from a subset of the plurality of nodes

having the contents for the new node, wherein each of the replies identifies

what subset of the block files is available in a replying node and performance

characteristics of the replying node; and

the new node downloading desired subsets of the block files the from the replying

nodes that are least congested.

48.   (New) The system of claim 47, wherein the network comprises a packet-

communication network.

49.   (New) The system of claim 47, wherein the set of attributes comprises a bitmap and

the set of rolled up attributes comprises a combination of the set of attributes of all

lineal descendants of the node.